WESTERN SHASTA RCD

2008 WMA Base Funding Work Plan

Member of Shasta County WMA

Title: Arundo Donax Control

January 1, 2009 – December 31, 2009

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Please Confirm, All projects described in this work plan will be in one contract with (if more than one contract is desired, please describe here): Confirmed, 1 contract with Western Shasta RCD

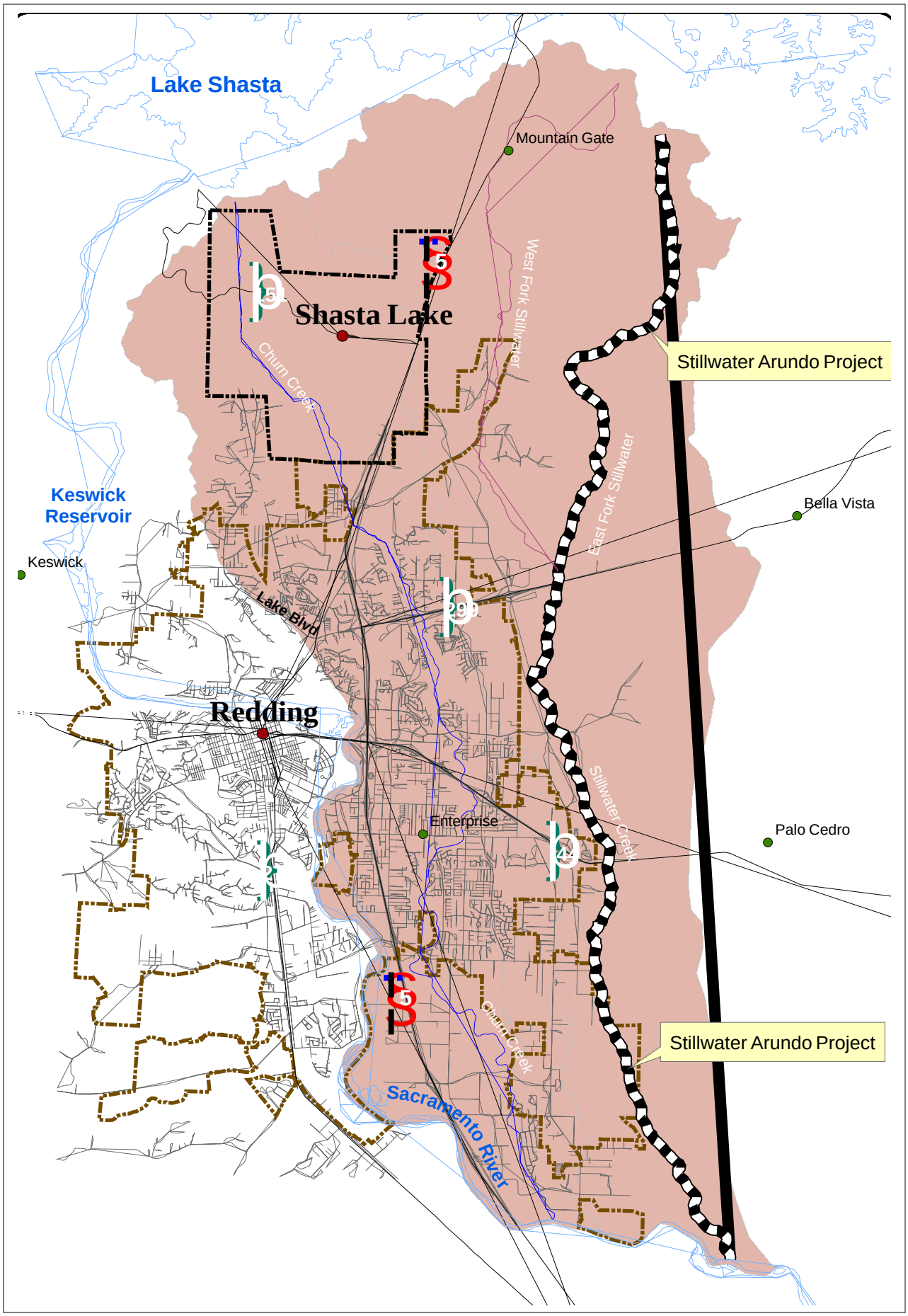
Project Objectives:
The Shasta County Weed Management Area (WMA) will focus on continuing the efforts, which began in 2007, to eradicate the largest concentration of *Arundo donax* in Shasta County. The area prioritized for continued treatment is on Stillwater Creek from the northernmost extent of Arundo to the Sacramento River (Figure 1). Stillwater Creek is a tributary of the Sacramento River; and without complete eradication of Arundo, efforts to control and eradicate Arundo below the confluence with the Sacramento River will be continually undermined by propagative material from Stillwater Creek.

To accomplish tasks as outlined below, the WMA will be using the Western Shasta RCD (WSRCD) staff, Shasta County Department of Agriculture (SCADS), staff, a California Conservation Corps (CCC) crew, Shasta County Mosquito and Vector District staff (SCMVD), and trained Redding Rotary Steam Team (RRST) volunteers operating under a certified/licensed herbicide applicator for this project. The field crew will receive training regarding the safe and proper use of pesticides and GPS weed mapping procedures.

Background:

Arundo donax was introduced to upper Stillwater Creek in the 1960's as a means to control erosion of the stream banks. An inventory that was conducted in 2003-2004 (Stillwater Creek Noxious Inventory, Western Shasta RCD) revealed that Arundo had infested a 16 mile stretch of

Figure 1: Stillwater Arundo Control Project



Stillwater Creek from the original introduction sites to the confluence with the Sacramento River. Without a doubt, Stillwater Creek has served as a major source of propagative material that contributed to the infestation of Arundo for many miles along the Sacramento River. Arundo was also scattered in numerous smaller concentrations throughout the Redding area. As a result, the Shasta County Weed Management Area identified Arundo as the top priority for eradication of a "B-Rated" invasive species in Shasta County.

The Redding Rotary Stream Team has led an effort since 2004 to treat most of the smaller isolated occurrences of Arundo. This has been very successful as there are only a few isolated patches left in the Redding area.

The WSRCD, as the lead for the WMA, received grant monies from the Ca. Dept. of Food and Agriculture to eradicate Arundo along Stillwater Creek in 2007. In August and September 2007, the WSRCD coordinated the initial application of herbicide to Arundo along the 16 mile corridor of Stillwater Creek. The work was accomplished with major effort and in-kind contributions from the WSRCD, RRST, SCADS, SCMVD, and the CCC's. Initial results were good and mortality was noted throughout the corridor (Figure 2). However, Arundo is an especially tenacious plant that will readily resprout if not completely killed. Experience has shown that several years of treatment are necessary for eradication. A second herbicide application was conducted in June 2008 through the efforts of the RRST, CCC's, SCMVCD and the WSRCD. It is planned to continue retreatment of scattered plants for an additional 3 years if funding is available.

How will this directly or indirectly benefit the environment, wildlife, and other areas:
Long-term benefits include potential for sustained rearing habitat for salmonids and other aquatic and terrestrial organisms due to increased water supplies and less sedimentation, lower water temperatures from enhanced riparian vegetation, improved water quality, reduced mosquito populations, and increased public awareness of *Arundo donax* and other invasive plant species.

Efforts to eradicate Arundo from the Sacramento River will be compromised if Arundo material continues to flow from Stillwater Creek.

Priority Area Being Addressed – Stillwater Creek in Shasta County WMA:
This proposal supports the current efforts to eradicate the largest infestation of Arundo in Shasta County; beginning at the northernmost population and continuing south to the Sacramento River. The WSRCD will coordinate the spring 2009 retreatment of resprouting *Arundo donax* as well as any new clumps that may occur and the fall 2009 monitoring.

Project Methods:
The 16 mile corridor along Stillwater Creek will be treated at the proper time, with the proper steps, and the appropriate IPM method. It will involve completely spraying the resprouts on the plants that have not suffered 100% mortality from the previous herbicide applications and any new plants. This will take place no earlier than June 2009 with additional spot treatment as needed during the active growth period in 2009. It is anticipated that additional spot treatment may have to occur in 2010 and 2011 for resprouts and any new plants.

In-kind equipment will include a 100-gallon tank water tender (CCC), a 30 gallon mounted sprayer on an ARGO ATV (SCMVCD), emergency wash tank (RCD), a 20 gallon mounted tank on a quad ATV (RRST), personal safety gear and 10 sprayer backpacks (RRST, CCC, and WSRCD), and herbicide and surfactant (WSRCD).

Surveying and Mapping:
A survey is planned during the new project to assess the success of previous efforts and to determine the need for future retreatment. All areas treated and surveyed will be displayed on a map that will be submitted to all WMA partners and CDFA at the completion of the project.

Reporting:
A project report will be submitted at the completion of the contract and will include the following information: number of plants treated if less than 100 plants, gross area surveyed, control tool utilized, % change (reduction) between visits, and photographs.

Figure 2: Examples of Before and After Treatments

August 2007

October 2007

Budget: (See Next Page)